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Kang Soo Seo

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HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

FINDLEY, CHRISTOPHER G

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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/702,557	Applicant(s) SEO ET AL.	
	Examiner CHRISTOPHER FINDLEY	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/2010, 4/08/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 12-14, filed 2/23/2010, with respect to the rejection(s) of claim(s) 1-30 and 32 under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kato et al. (US 20050019007 A1) and Kato et al. (US 20050019007 A1) in view of Yamane et al. (US 6393196 B1).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 12-19, 22, 25, 28, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (US 20050019007 A1, hereinafter referred to as "Kato").**

Re **claim 1**, Kato discloses a computer readable medium having a data structure for managing reproduction of video data having at least one reproduction path, comprising: a data area for storing stream files, each stream file including video data,

Art Unit: 2621

each stream file associated with one of a portion common to the reproduction paths and a particular reproduction path among the reproduction paths of the video data (Kato: Fig. 14, M2TS directory contains .m2ts files); a playlist area storing a playlist file, the playlist file for identifying the common reproduction path portion and the particular reproduction path to reproduce, the playlist file including at least one playitem, each playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files); and a clip information area for storing management information for managing reproduction of the video data, the management information including clip information files, each one of the clip information files being associated with a corresponding stream file (Kato: Fig. 14, CLIPINF directory contains .clpi files), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file), wherein the clip information file, the playlist file and the stream file is logically separate and include different file extensions (Kato: Fig. 14, data streams have .m2ts extensions, clip information files have .clpi extensions, and playlists have .rpls extensions).

Re **claim 12**, Kato discloses a data structure for managing reproduction of video data having at least one reproduction path on a recording medium, comprising: stream files of a data area of the recording medium, each stream file including video data, each stream file associated with one of a portion common to the reproduction paths and a

Art Unit: 2621

particular reproduction path among the reproduction paths (Kato: Fig. 14, M2TS directory contains .m2ts files); a playlist file in a playlist area of the recording medium, the playlist file for identifying the common reproduction path portion and the particular reproduction path to reproduce, the playlist file including at least one playitem, each playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files); and management information for managing of the video data in clip information files, the clip information files recorded in a clip information area of the recording medium (Kato: Fig. 14, CLIPINF directory contains .clpi files), each one of the clip information files being associated with a corresponding stream file, each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file), wherein the clip information file, the playlist file and the stream file is logically separate and include different file extensions (Kato: Fig. 14, data streams have .m2ts extensions, clip information files have .clpi extensions, and playlists have .rpls extensions). Kato additionally discloses a corresponding write unit (Kato: Fig. 1, write unit 22) and recording methods (Kato: Figs. 128-131, and 133).

Re **claim 13**, Kato discloses a method of reproducing a data structure for managing reproduction of video data having at least one reproduction path recorded on a recording medium, comprising: reproducing stream files from a data area of the recording medium, each stream file including video data, each stream file associated

Art Unit: 2621

with one of a portion common to the reproduction paths and a particular reproduction path among the reproduction paths (Kato: Fig. 14, M2TS directory contains .m2ts files); and reproducing a playlist file recorded in a playlist area of the recording medium, the playlist file for identifying the common reproduction path portion and the particular reproduction path to reproduce, the playlist file including at least one playitem, each playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files); reproducing management information for managing reproduction of the video data from clip information files, the clip information files being recorded in a clip information area of the recording medium, each one of the clip information files associated with a corresponding stream file (Kato: Fig. 14, CLIPINF directory contains .clpi files), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file), wherein the clip information file, the playlist file and the stream file is logically separate and include different file extensions (Kato: Fig. 14, data streams have .m2ts extensions, clip information files have .clpi extensions, and playlists have .rpls extensions).

Re **claim 14**, Kato discloses an apparatus for processing a data structure for managing reproduction of video data having at least one reproduction path on a recording medium, comprising: an optical unit configured to process data on the recording medium (Kato: Fig. 1); and a controller, coupled to the optical unit (Kato: Fig.

Art Unit: 2621

1, controller 23), configured to control the optical recording unit to process stream files output from the encoder in a data area of the recording medium, each stream file including video data, each stream file associated with one of a portion common to the reproduction paths and a particular reproduction path among the reproduction paths (Kato: Fig. 14, M2TS directory contains .m2ts files); the controller configured to the optical unit to process a playlist file in a playlist area of the recording medium, the playlist file for identifying the common reproduction path portion and the particular reproduction path to reproduce, the playlist file including at least one playitem, each playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files); and the controller configured to control the optical unit to process management information for managing reproduction of the video data in clip information files, the clip information files being recorded in a clip information area of the recording medium, each one of the clip information files being associated with a corresponding stream file (Kato: Fig. 14, CLIPINF directory contains .clpi files), each clip information file including a map for the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file), wherein the clip information file, the playlist file and the stream file is logically separate and include different file extensions (Kato: Fig. 14, data streams have .m2ts extensions, clip information files have .clpi extensions, and playlists have .rpls extensions). Kato additionally discloses a corresponding write unit (Kato: Fig.

Art Unit: 2621

1, write unit 22) and recording methods (Kato: Figs. 128-131, and 133), wherein the system includes an AV encoder (Kato: paragraph [0147]).

Re **claim 15**, Kato discloses an apparatus for reproducing a data structure for managing reproduction of video data having at least one reproduction path recorded on a recording medium, comprising: an optical reproducing unit configured to reproduce data recorded on the recording medium (Kato: Fig. 1, readout unit 28); a controller, coupled to the optical reproducing unit (Kato: Fig. 1, controller 23), configured to control the optical reproducing unit to reproduce stream files from the recording medium, each stream file including video data, each stream file associated with one of a portion common to the reproduction paths and a particular reproduction path among the reproduction paths (Kato: Fig. 14, M2TS directory contains .m2ts files); the controller configured to the optical recording unit to reproduce a playlist file from a playlist area of the recording medium, the playlist file for identifying the common reproduction path portion and the particular reproduction path to reproduce, the playlist file including at least one playitem, each playitem indicating a playing interval from in-point until out-point, the in-point and out-point pointing to time positions on a time axis of the video data (Kato: Fig. 14, PLAYLIST directory contains .rpls files); and the controller configured to control the optical reproducing unit to reproduce management information for managing reproduction of the video data from clip information files, the clip information files recorded in a clip information area of the recording medium, each one of the clip information files being associated with a corresponding stream file (Kato: Fig. 14, CLIPINF directory contains .clpi files), each clip information file including a map for

Art Unit: 2621

the associated stream file, the map mapping a presentation time stamp to an address for at least one entry point in the associated stream file (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file), wherein the clip information file, the playlist file and the stream file is logically separate and include different file extensions (Kato: Fig. 14, data streams have .m2ts extensions, clip information files have .clpi extensions, and playlists have .rpls extensions).

Re **claim 16**, Kato discloses that only one stream file is associated with each particular portion representing a same time period of the video data (Kato: Fig. 3, each particular clip information file is associated with a particular AV stream file).

Re **claim 17**, Kato discloses that the video data is represented by packets (Kato: paragraph [0200]).

Re **claim 18**, Kato discloses that the video data is represented by packets (Kato: paragraph [0200]).

Claim 19 has been analyzed and rejected with respect to claim 3 above.

Claim 22 has been analyzed and rejected with respect to claim 3 above.

Claim 25 has been analyzed and rejected with respect to claim 3 above.

Claim 28 has been analyzed and rejected with respect to claim 3 above.

Re **claim 32**, Kato discloses that the playlist file includes at least one indicator for indicating a reproduction order of the common and particular reproduction path (Kato: Fig. 3).

Claim Rejections - 35 USC § 103

Art Unit: 2621

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2-11, 20, 21, 23, 24, 26, 27, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 20050019007 A1) in view of Yamane et al. (US 6393196 B1, hereinafter referred to as "Yamane").**

Re **claim 2**, Kato does not explicitly disclose that the stream files are interleaved. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 16, lines 4-15) and also guarding against buffer underflow (Yamane: column 16, lines 18-27). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of interleaving units arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling multi-angle control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re **claim 3**, Kato discloses that the stream files associated with the particular reproduction path are interleaved between the stream files associated with the common reproduction path portion (Kato: Fig. 3 shows a virtual playlist section using clip information from subsections of the clip information files).

Re **claim 4**, Kato does not explicitly disclose that the stream files have a size to prevent a reproducing apparatus buffer from under-flowing during reproduction of the stream files. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 16, lines 4-15) and also guarding against buffer underflow (Yamane: column 16, lines 18-27). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of interleaving units arranged on an recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling multi-angle control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re **claim 5**, Kato does not explicitly disclose that the stream files have a size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the

Art Unit: 2621

stream files. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 16, lines 4-15) and also guarding against buffer underflow (Yamane: column 16, lines 18-27). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of interleaving units arranged on an recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling multi-angle control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Re **claim 6**, Kato does not explicitly disclose that more than one stream file is associated with a same one of a common reproduction path portion and a particular reproduction path when the one of the common reproduction path portion and the particular reproduction path includes data exceeding a stream file size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the stream files. However, Yamane discloses a multimedia stream enabling alternative reproduction of video data, wherein multimedia data is segmented into interleaved units of a particular size so that the seek distance of any seek operation can be suppressed to the size of

Art Unit: 2621

the interleave unit, and reproduction can be sustained without causing a buffer overflow (Yamane: column 16, lines 4-15) and also guarding against buffer underflow (Yamane: column 16, lines 18-27). While Kato relates to Blu-Ray technology and Yamane relates to DVD technology, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to combine the principle relied upon from Yamane with the disclosure of Kato, because both documents disclose the use of interleaving units arranged on a recording medium, and the buffer underflow/overflow protection of Yamane is therefore applicable to the recording and reproducing scheme of Kato. Accordingly, in order to guard against such an overflow or underflow while enabling multi-angle control such as in Kato, regulation of the size of the interleaving units, as disclosed by Yamane, would be an obvious inclusion.

Claim 7 has been analyzed and rejected with respect to claim 5 above.

Claim 8 has been analyzed and rejected with respect to claim 6 above.

Claim 9 has been analyzed and rejected with respect to claim 4 above.

Claim 10 has been analyzed and rejected with respect to claim 5 above.

Claim 11 has been analyzed and rejected with respect to claim 6 above.

Claim 20 has been analyzed and rejected with respect to claim 5 above.

Claim 21 has been analyzed and rejected with respect to claim 4 above.

Claim 23 has been analyzed and rejected with respect to claim 5 above.

Claim 24 has been analyzed and rejected with respect to claim 4 above.

Claim 26 has been analyzed and rejected with respect to claim 5 above.

Claim 27 has been analyzed and rejected with respect to claim 4 above.

Art Unit: 2621

Claim 29 has been analyzed and rejected with respect to claim 5 above.

Claim 30 has been analyzed and rejected with respect to claim 4 above.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER FINDLEY whose telephone number is (571)270-1199. The examiner can normally be reached on Monday-Friday (8:30 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/

Application/Control Number: 10/702,557

Page 14

Art Unit: 2621

Supervisory Patent Examiner, Art Unit 2621

/Christopher Findley/